

The following is information for RCA boundary line users:

## **INTRODUCTION**

Groundfish RCAs are defined by boundary lines approximating depth contours. There are two ways in which RCAs can change through time. The first is modification of latitude and longitude coordinate points to better approximate a particular depth contour. The second is changing which depth contours serve as the boundary lines for the RCA (i.e. an RCA originally bounded by the lines approximating the 75-fm and 150-fm contours may be changed through inseason action to be bounded from the shoreline to 250-fm). To clearly show temporal changes to Groundfish RCAs, we need to provide information on both those types of modification.

## **COORDINATES**

NMFS has formatted the coordinates approximating depth contours that delineate RCA boundaries so that the data may be more easily used in mapping software. Coordinates are given in CSV format (comma-delimited ASCII text format). CSV format presents data in a basic format, allowing for easier transitions to different software. CSV files can be opened with Microsoft Excel or imported into a text file. CSV files do not allow for multiple worksheets within a single file; therefore, each particular RCA boundary line has its own separate file. For each year there is a set of coordinates in a WinZip file. The contents of the .zip files is comprehensive for the year and includes updated files for all the coordinate changes published that year in the Federal Register. File names are standardized, giving first the name of the fathom contour followed by the date it was made effective. An example would be "40fm010104", a file that contains the coordinates approximating the 40 fathom depth contour, effective January 1<sup>st</sup>, 2004. At the start of every management cycle, every RCA will be listed with a January 1<sup>st</sup> effective date. Changes to boundary lines from corrections or inseason actions are also included and will have a later effective date, i.e. "40fm042904". This file name indicates that the coordinates approximating the 40 fathom depth contour changed, effective April 29<sup>th</sup>, 2004.

Each CSV file contains all of the coordinates delineating a particular fathom depth, coastwide\*. For example, the "60 fm" worksheet provides the boundary line approximating the 60 fm contour along the length of the West Coast, and the boundary lines approximating the 60 fm contours around the Channel Islands. To find RCA boundaries for specific sections of the coast, open the correct file and scroll through the coordinates until the appropriate section of the coast is reached.

\*Separate files are provided for the lines at 200 fm and 250 fm that include open areas for petrale sole fishing.

## **RCA BOUNDARIES**

NMFS has provided tables that summarize the changes to RCA boundaries during each year. These tables (separated by gear type and North or South of 40°10' N. latitude) show which depth contours formed the RCA boundary and how they may have changed during the year. These tables for each year are available on the Groundfish RCA Archives page as a PDF, viewable by Adobe Acrobat Reader.

## **OTHER INFORMATION**

Any discrepancies between the CSV coordinate files provided here and the coordinates published in the Federal Register will be resolved in favor of the Federal Register.

Worksheet Column Header Key:

id\_area = unique identifying number for a particular coordinate within a particular line

area\_name = identifying name for a particular line at a particular depth contour, primarily distinguishes between coastwide lines and lines around islands

lat\_deg = degrees latitude for a particular coordinate

lat\_min = decimal minutes for a particular coordinate, associated with the degrees latitude for that coordinate

lat\_dir = latitude direction (N = North)

lon\_deg = degrees longitude for a particular coordinate

lon\_min = decimal minutes for a particular coordinate, associated with the degrees longitude for that coordinate

lon\_dir = longitude direction (W = West)

lat\_dd = latitude for a particular coordinate, given in decimal degrees

lon\_dd = longitude for a particular coordinate, given in decimal degrees